

Amendments to the Claims

1. (Currently amended) A process for treating sea water comprising

(A) adding to said sea water about 0.1 to about 60 g/L of a compound selected from the group consisting of sodium hydroxide, sodium carbonate, potassium hydroxide, potassium carbonate, calcium oxide, calcium hydroxide, calcium carbonate, aluminum hydroxide, aluminum sulfate, aluminum potassium sulfate, and mixtures thereof, whereby a precipitate of a calcium compound forms in said water;

(B) separating said precipitate from said water; and

(C) desalinating said water to a first stream that has a lower concentration of dissolved solids and a second stream that has a higher concentration of dissolved solids, and

(1) a mixture is formed of said second stream and said sea water;

(2) a sufficient amount of said compound is added to said mixture to bring its concentration within a range of about 0.1 to about 60 wt%; and

(3) said mixture is recycled to step (B).

2. (Previously amended) A process according to Claim 1 wherein prior to step (A) said sea water is filtered.

3. (Previously amended) A process according to Claim 1 wherein said sea water is desalinated using reverse osmosis.

4. (Previously amended) A process according to Claim 1 wherein said sea water is desalinated using flash evaporation.
5. (Original) A process according to Claim 1 wherein said solid precipitate is separated by filtration.
6. (Canceled)
7. (Previously amended) A process according to Claim 1 wherein acid is added to said sea water after step (B) to lower the pH of said sea water to between about 6.5 and about 8.5.
8. (Previously amended) A process according to Claim 7 wherein the pH of said sea water is adjusted before step (C).
9. (Original) A process according to Claim 1 wherein said compound is selected from the group consisting of calcium oxide, calcium hydroxide, sodium hydroxide, sodium carbonate, and mixtures thereof.
10. (Original) A process according to Claim 1 wherein the amount of said compound is

about 0.2 to about 40 g/L.

11. (Original) A process according to Claim 1 wherein said desalinating is performed at a temperature in excess of 70°C.

12. (Cancelled)

13. (Cancelled)

14. (Currently amended) A process according to Claim 1 wherein said compounds are added in two steps, a first step in which about 0.04 to about 40 g/L of calcium hydroxide, calcium oxide, or a mixture thereof is added, whereby a first precipitate is formed and is separated from the water, and a second step in which about 0.1 to about 60 g/L of sodium carbonate and about 0.04 to about 40 g/L of sodium hydroxide, ~~or a mixture thereof~~ is added, whereby a second precipitate is formed and is separated from the water.

15. (Currently amended) A process for treating sea water to reduce the concentration of dissolved salts therein comprising

(A) adding to said sea water about 0.04 to about 40 g/L of a compound selected from the group consisting of calcium hydroxide, calcium oxide, and mixtures thereof,

whereby a first precipitate that comprises calcium hydroxide is formed;

(B) separating said first precipitate from said water;

(C) adding to said water about 0.01 to about 60 g/L sodium carbonate and about 0.04 to about 40 g/L sodium hydroxide, whereby a second precipitate that comprises magnesium hydroxide is formed;

(D) separating said second precipitate from said water; and

(E) desalinating said water using reverse osmosis to produce a first stream that has a lower concentration of dissolved solids and a second stream that has a higher concentration of dissolved solids, and

(1) a mixture is formed of said second stream and said sea water;

(2) a sufficient amount of said compound is added to said mixture to bring its concentration within a range of about 0.4 to about 40 g/L; and

(3) said mixture is recycled to step (C).

16. (Previously amended) A process according to Claim 15 wherein, in step (A), said compound is calcium oxide.

17. (Original) A process according to Claim 16 wherein the amount of said calcium oxide added is about 0.07 to about 30 g/L, the amount of said sodium carbonate added is about 0.12 to about 50 g/L, and the amount of said sodium hydroxide added is about 0.9 to about 34 g/L.

18. (Previously amended) A process for treating sea water to reduce the concentration of dissolved salts therein comprising

(A) adding to said sea water about 0.4 to about 40 g/L of a compound selected from the group consisting of calcium hydroxide, calcium oxide, and mixtures thereof, whereby a first precipitate that comprises calcium hydroxide is formed;

(B) separating said first precipitate from said water;

(C) adding to said water about 0.1 to about 60 g/L sodium carbonate and about 0.04 to about 40 g/L sodium hydroxide, whereby a second precipitate that comprises magnesium hydroxide is formed;

(D) separating said second precipitate from said water; and

(E) desalinating said water using flash evaporation to produce a first stream that has a lower concentration of dissolved solids and a second stream that has a higher concentration of dissolved solids, and

(1) a mixture is formed of said second stream and said sea water;

(2) a sufficient amount of said compound is added to said mixture to bring its concentration within a range of about 0.4 to about 40 g/L; and

(3) said mixture is recycled to step (C).

19. (Previously amended) A process according to Claim 18 wherein, in step (A), said compound is calcium oxide.

20. (Original) A process according to Claim 19 wherein the amount of said calcium oxide added is about 0.07 to about 30 g/L, the amount of said sodium carbonate added is about 0.12 to about 50 g/L, and the amount of said sodium hydroxide added is about 0.9 to about 34 g/L.

21. (Canceled)

22. (Canceled)